Symptom over-reporting ≠ malingering

Summary

The work in this dissertation focuses on longstanding conceptual issues surrounding symptom validity. Specifically, it focuses on what the *Diagnostic and Statistical Manual for Mental Disorders-5 (DSM-5)* and its predecessors refer to as 'malingering'; the deliberate over-reporting and/or fabrication of symptoms for external gain. Such gain may include obtaining a lowered sentence for a crime within forensic settings or disability benefits for work- or accident-related complaints in litigating settings. Throughout this dissertation, we attempt to refrain from using the term 'malingering'. Instead, we frequently use the conceptually more neutral term *feigning* as it is somewhat less pejorative and makes no assumptions about the individual's underlying motives. In using the term malingering, the DSM relies upon a criminological model. At the heart of this model lies the idea that there exists a strict demarcation between malingering and what has formerly been known as hysteria. Over time, hysteria has been classified under numerous alternative (often poorly operationalized) labels such as the somatoform, conversion, and dissociative disorders in psychiatric settings, and functional somatic syndrome, medically unexplainable symptoms (MUS) as well as more syndrome-specific labels such as fibromyalgia and irritable bowel syndrome in medical settings. All these labels refer to constellations of non-specific and ambiguous symptoms, including fatigue, concentration problems, distress, and general malaise, to name only a few. Throughout this dissertation, we rely on the broad – and admittedly imperfect – rubric of MUS to describe such constellations. After all, as is the case with feigned symptoms, convincing physiological markers of the patient's self-reported (severity of) pathology is typically absent.

To make a distinction between feigning and MUS, clinicians are required to evaluate two categorically formulated assumptions. Namely, 1) patients produce their symptoms *either* consciously *or* unconsciously, and 2) patients' motives are *either* external (e.g., financial benefit) *or* internal (and, therefore to some level, unknown to the individual). Given that both these factors are difficult to assess, differentiating between MUS and feigning is challenging for clinicians. When faced with complex decisions, clinicians may feel tempted to rely on swift intuitive (i.e., heuristics; system-1), yet potentially faulty decision-making. That is, in their efforts to delineate whether symptoms are feigned or genuine, their attention may be lured to outstanding details of a case that fit the archetypal feigning patient and in doing so they may overlook important disconfirming information. In **Chapter 1**, we provide a historical framework of symptom validity from which to understand the development of persistent myths about feigning that may foster biased decision-making in clinicians. These myths relate to the ancient demarcation between malingering and hysteria. One myth is that particularly

"bad" people, namely those with antisocial or psychopathic personality features, do "bad" things like feigning. The other myth is that feigning is mutually exclusive with genuinely experienced symptoms and must therefore be strictly delineated from other symptom presentations, most notably MUS. Because of these myths, the archetypical feigning patient has become portrayed as an antisocial, manipulative 'wolf in sheep's clothing', who uses feigning to blend in with genuine patients as to receive benefits associated with the sick role. The archetypical hysterical (i.e. MUS) patient, seems more fitting with the fairytale image of a "damsel in distress". That is, symptoms are presumably produced beyond conscious control and therefore the individual is a victim in need of savior, for example, by means of (additional) treatment or diagnostic testing. Furthermore, while the feigning patient is required to take personal responsibility because symptoms are presumably produced deliberately, individuals receiving MUS-related labels are, in a way, excused from blame and can access sick role benefits.

A central question that should be raised is whether adhering to a criminological model of feigning is at all evidence-based. In **Chapter 2**, we conducted a qualitative review of the extant empirical literature on the link between feigning and antisocial personality features (i.e., operationalized as antisocial personality disorder – ASPD – or psychopathy). We assessed two questions: Are individuals with antisocial features more likely to feign their symptoms than individuals without such features? Or are they more talented at feigning than other patients and, consequently, able to evade detection? Our findings suggest that a link between antisocial features and feigning cannot be consistently reproduced. First, overall, the literature suggests there are no significantly raised prevalence rates of feigning in participants who meet criteria for ASPD or psychopathy. Furthermore, when a link is found, it tends to be carried by norm-violating *behavior* (Factor 2 of psychopathy) rather than *traits* (Factor 1 of psychopathy; e.g., callousness, remorselessness, and superficial charm). Second, studies into deceptive abilities were consistent in their null findings, meaning that there is no empirical support to assume that antisocial individuals are, by definition, more successful at feigning. If anything, feigning may be context rather than trait-dependent. That is, it may be encountered in people of all walks of life and it is particularly important to consider in contexts rife with attractive incentives. To further this point, we collected additional data about feigning and antisocial features among prisoners and patients within six forensic hospitals and one prison in the Netherlands (N = 84 male criminal defendants). Replicating the findings from our literature review, we found support for the idea that context is more relevant to consider than traits. Furthermore, we found this to be the case for both over- and under-

reporting of symptoms (i.e., minimization and/or denial of symptoms). These data also underline the point that feigning should not be considered a unidimensional construct: It is not confined to *over*-reporting but also includes *under*-reporting, which are both affected by contextual variables. Thus, rather than focusing on character traits, clinicians and researchers – and, evidently, in some ways their patients, too – may benefit more from an alternative approach that acknowledges the context specificity and dimensional properties of feigning.

In contrast to what the criminological model of feigning dictates, research and clinical data suggest that feigned symptoms may co-occur with genuinely experienced symptoms. In fact, they may escalate into such symptoms, suggesting that feigning has pathological potential: that is, people may fool themselves into believing their symptoms are more serious than they really are and in doing so they may forget about the origin of their symptom production. In **Chapter 2**, we explored whether this may be explained by *post-decisional* cognitive dissonance. That is, people prefer consistency between their behavior and their beliefs and are inclined to see themselves in a positive light (i.e., egoistic/positivity bias). Inconsistencies cause psychological discomfort (dissonance) in most individuals, motivating them to engage in strategies to reduce the inconsistency. In the case of feigning, cognitive dissonance may arise due to the inconsistency between feigning and people's general desire to consider oneself as an honest, moral being. An exception to this rule may be individuals who score high on antisocial features, most notably psychopathy. Psychopathy has been proposed to go hand in hand with a lessened sensitivity to cognitive dissonance and its self-deceptive effects. This idea seems to be supported by the findings from our pilot study. We requested students (N = 60) to write a fake sick note to their teachers as to – hypothetically – excuse their absence from class. We assessed their levels of somatic symptoms before and after writing the note. Participants who felt uncomfortable about writing the sick note reported a higher degree of somatic symptoms afterwards. Higher psychopathy scores were associated with lower dissonance scores. This may suggest that psychopathy provides a buffer against symptom escalation after feigning – via the cognitive dissonance route. Evidently then, with all these findings in mind, it seems that discussions about the link between antisocial features and feigning should start focusing on how such features may play an important role in the *consequences* rather than the *occurrence* of feigning.

The criminological model of feigning has strong moral overtones, which may foster tunnel vision in clinicians. In **Chapter 3**, we examined what would happen when (future) experts are presented with a patient who seemingly fits the archetypical feigning patient but exhibits *non-deviant* scores on two symptom

validity tests (SVTs). Will experts show tunnel vision? Are they able to adjust for this when provided with corrective information that is in support of the scenario that the patient is, in fact, likely to be presenting genuine symptoms? Briefly, when patients obtain *non-deviant* scores on an SVT this provides support for a credible symptom presentation, or in technical terms *negative predictive power (NPP)*. Given that the field of symptom validity has been preoccupied with the identification of positive cases (i.e., true positives; feigned symptoms), clinicians might overlook the value of *non-deviant* SVT scores when a patient, at face value, seems to fit the archetypical feigning profile. We looked into the issue across three studies (N = 55 students, N = 42 clinical and forensic experts, and N = 92 clinical experts). Participants read a case alluding to DSM's typology of feigning and successively received new information, including *non-deviant* scores on two SVTs, namely the Structured Inventory of Malingered Symptomatology (SIMS) and the Amsterdam Short-Term Memory (ASTM). After each piece of information, they rated their suspicion of feigning and their confidence in this judgment. In a fourth study (N = 92 students), we educated participants about the shortcomings of the criminological model and the importance of considering the negative predictor power (NPP) of tests, after which they, too, were provided with the archetypical feigning case. The findings of these studies can be summarized as follows: across studies, suspicion rates for feigning circled around the midpoint of the scale (i.e., 50). Furthermore, non-deviant SVT scores did not provide sufficient corrective information, nor did additional education in the form of explaining problems related to the criminological model of feigning and the importance of considering NPP. Our findings suggest that experts may have difficulties in understanding that non-deviant SVT scores reduce the probability of feigning as a correct differential diagnosis. With such considerations in mind, it is important to properly train clinicians in the use of SVTs and their interpretation, which may be a quest that proves to be successful if clinicians' decision-making strategies are more thoroughly understood. In other words, symptom validity researchers can further the field by studying *how* clinicians come to their decisions. This way, we may stimulate system-2 (cognitive effort) rather than system-1 (heuristics) reasoning skills.

In **Chapter 4**, instead of focusing on feigning, we looked at the other side of the coin, namely hysteria (i.e., MUS). Again, the decision-making of clinicians is important here. There is a recurrent trend of newly invented mechanisms to explain away *deviant* SVT scores in patients who report such symptoms. Clinicians may explain deviant SVT scores away as cries for help or by, alternatively, considering them to be *inherent* to the psychopathology itself. One proposed mechanism that is currently popular is *diagnosis threat*. Diagnosis threat is a close cousin of

stereotype threat and finds its roots in social priming theory. The central idea is that presenting individuals with something as simple as a diagnostic label may activate negative stereotypes and expectations related to that label, which then, according to the theory, induces anxiety and interferes with performance on a broad array of cognitive measures. Laboratory evidence in support of diagnosis threat effects has been collected in the past years. What is the clinical potential of their findings? We conducted a meta-analysis of the extant literature on diagnosis threat (K = 6, N = 309). These studies were confined to establishing diagnosis threat in non-clinical individuals with a self-reported history of mild head injury (MHI), a diagnostic classification that is known for its subgroup of patients whose symptoms fail to improve within the expected recovery period. Our synthesis of findings indicates that diagnosis threat effects are small, with a weighted effect size (i.e., Cohen's d) = .19 for cognitive measures and self-report measures combined. The effect size for cognitive tests was more pronounced than that of self-reports. However, both were in the realm of *small* effects. It stretches credulity that subtle diagnosis threat effects may produce deviant scores on SVTs. Thus, although diagnosis threat may certainly have some effect, we believe it should not be given utmost attention in the clinician's office. Perhaps the take home message of this chapter may best be summarized as follows: take the *positive predictive power* (PPP) of tests seriously; after all, *deviant* scores provide support for non-credible responding; your patient's symptom reports can therefore not be taken at face value. Furthermore, we believe that more systematic attention to other factors in the clinician-patient relationship, including the use of premature interventions and excessive diagnostic testing but also feigning and secondary incentives is far more important than *diagnosis threats* and other circular explanations. After all, they do little to further our understanding of patients' symptom presentations.

In **Chapter 5**, we reflected on the overlap between feigning and MUS as well as on the state of the art in research on feigning. This research relies on *instructed* simulation designs to a great extent. While such designs are useful for validating measures to assess symptom validity, they cannot accommodate for more conceptual research questions because they are plagued by the so-called 'malingering-simulation paradox': honest individuals are instructed to feign as to study those who feign when instructed to be honest. We present a number of innovative experimental paradigms that may fuel research efforts into the theoretical underpinnings of feigning. Importantly, feigning serves to mislead others deliberatively and given its ethical connotations it may be accompanied by feelings of guilt (i.e., cognitive dissonance) in some individuals. Across three studies, we aimed to induce and study feigning in our participants (N = 78,

N = 60, and *N* = 54). We examined three parameters of our success: 1) refusal rates of feigning, 2) the extent to which individuals feel guilty for feigning, and 3) the extent to which participants report residual complaints – conceptualized as post-hoc violation justifications. In Study 1, we relied on a medical version of Festinger's traditional cognitive dissonance study in that we asked participants if they could dupe a medical student (i.e., confederate) into believing they were real patients. They were then provided with a case vignette of a patient and asked to play this patient. In Study 2, participants were either instructed or given the choice to feign symptoms to – hypothetically – obtain an extra exam. We used this approach to make the scenario of feigning more self-relevant as participants would be stimulated more explicitly than in Study 1 to link their own identity to claims of being ill. There was a refusal rate of 14% for Study 1 and 23% for Study 2. About 34% and 24% of participant reported feelings of guilt in Study 1 and 2, respectively. These findings suggest that there are moral connotations of feigning, although they may not be generalizable to everyone; after all, a considerable number of participants did not report feelings of guilt at all. Although there were no obvious differences between groups in terms of residual symptoms, we found that feeling guilty for feigning was associated with exceeding the cut-off of the Brief Symptom Inventory-18 (i.e., BSI-18).

In a third study, we aimed to come closer to the real world by having participants participate in a dull task (a lexical decision making task of which we reduced the speed) and then providing them with the option to feign symptoms on several subscales of the Symptom Checklist-90 (i.e., SCL-90) to evade two more rounds of the task. 27 participants (57.4%) engaged in feigning as indicated by their choice to terminate the task. Our empirical endeavors suggest that the intrinsic motivation for feigning can be stimulated by providing individuals with a personally attractive incentive to do so. However, while we were able to come closer to an ecologically valid paradigm to study feigning, levels of feigning seemed modest across studies and we were unable to observe the residual effects of feigning that have been previously observed in research relying on instructed simulation designs. Consequently, residual effects and the mechanisms that may play a role in their occurrence need further study. Clearly, the studies in Chapter 5 address a topic difficult to grasp empirically. However, given that it is possible to create innovative paradigms to study theories underlying feigning, there is no convincing argument for symptom validity researchers to ignore essential questions in their field.

Symptom validity research has focused excessively on how to detect feigning. In **Chapter 6**, we took a step back and looked into how clinicians

may successfully curb feigning tendencies. We evaluated the promise of so-called "moral reminders", which have gained considerable popularity within neighboring research areas such as behavioral economics, moral decision making, and business ethics. Theoretically, moral reminders should induce *pre-decisional* dissonance and stimulate participants to opt for honest behavior because of the inconsistency felt between their moral self-standard and feigning. In Study 1 (N = 51) psychiatric out-patients completed a questionnaire alluding to morality (i.e., the Mother Teresa Questionnaire; MTQ), after which they completed several tests, including SVTs. In Study 2 (N = 36), we presented psychiatric out-patients with a moral contract, which they signed before completing a test battery of measures, including SVTs. Overall, scores on SVTs did not significantly differ from those of patients who had not been given a moral reminder. Interestingly, in Study 2, we found a potential backfire effect in that those who had signed the moral contract obtained higher rather than lower scores on a subscale of the SIMS – an effect that disappeared after correcting for multiple testing. In Study 3 (N = 132) we explored more thoroughly how different valences of moral reminders may affect symptom reporting across individuals from the general population. We did this because there is a competing mechanism that may be at play when people evaluate their own morally questionable behaviors, namely that of *moral balancing*. Moral balancing follows an opposite pattern of traditional consistency theories, of which cognitive dissonance theory is an example. That is, when people are induced to see themselves as moral beings (e.g., by preaching for honesty), this may inadvertently promote an overly positive self-evaluation that permits excusing one's own dishonest behavior. This is known as *moral licensing*. In contrast, when people are made aware of their own moral failures (e.g., via negative moral primes), they tend to engage in repairing behaviors, known as *moral cleansing*. We therefore provided participants with morally-laden negative (e.g., disloyal, evil), positive (e.g., honest, trustworthy), or neutral primes (e.g., chair, computer) and asked them to write self-relevant sentences using the presented words, after which we implicitly induced them to feign symptoms. We found no obvious differences between conditions in terms of their scores on both measures. However, participants in the negative prime condition reported higher levels of cognitive dissonance than those in the other conditions. Thus, if anything, it is negative and not positive primes that could prove efficient in reducing behavior such as feigning, behavior that people generally consider to be morally dubious. Nevertheless, given the unpredictable impact of moral reminders on moral behavior, they should not (yet) be used in clinical practice to tackle feigning tendencies. Rather, we need to gain further insight in contextual and individual difference factors that affect decision-making

in patients to improve interventions.

In **Chapter 7** we elaborated on this issue by critically examining a recently published study (i.e., Horner et al., 2017) in which the researchers provided (moral) warnings to patients prior to symptom validity assessment and compared their performance on a performance validity test (PVT) to that of patients who had not been warned. While the authors report their findings as representative of an effective and cost-effective intervention to curb feigning, a closer look at their data suggests otherwise. First, the intervention was solely found to be effective in patients with a self-reported (i.e., admitted) interest in disability benefits. That is, there was a lower proportion of PVT failure among these patients when compared with patients who admitted to having benefits but did not receive the intervention. Second, the effect was small (Cohen's d = .26). In reality, the intervention was ineffective in most participants. Furthermore, in interpreting normalized scores of those in whom the intervention seemed effective, the researchers seem to overlook that normalization of PVT scores may well be an indication of more sophisticated feigning. That is to say, the individual may have become more adept at evading detection (i.e., has become a more successful feigner). It may also suggest moral licensing, underscoring our point that despite decades of devoted research into symptom validity, we have made little progress in truly understanding feigning.

Chapter 8 puts the work from the previous chapters in a broader context. Basically, the take home messages of the dissertation can be catalogued as follows. First, the archetypal criminological description of the "feigning patient" is faulty and may negatively affect clinicians' diagnostic decision-making (i.e., Chapter 2, 3, and 4). Second, feigning and hysteria are *not* mutually exclusive. Rather, feigned symptoms may escalate into genuinely felt symptoms and may do so via a plethora as of yet largely unexplored pathways, including but not limited to cognitive dissonance (i.e., this dissertation). These pathways may, in fact, all have in common their capacity to foster source monitoring errors so that initially feigned symptoms are, over time, reevaluated and experienced as genuine. Indeed, we believe a more nuanced perspective to studying feigning is needed to more fully understand how feigning may spiral into persistent and genuinely felt symptoms. It is timely to look more thoroughly into the decision-making processes of clinicians as well as the sense-making processes of patients. Such endeavors are a priori discouraged if the criminological model is not officially abandoned by influential diagnostic manuals like the DSM. To sum up, the criminological model is unhelpful; it stifles research into theoretical underpinnings of feigning and may drive faulty clinical decision-making. Therefore, it must be replaced by a more nuanced and empirically informed perspective; one that recognizes that feigning is – at least to some extent

– a normal social phenomenon that has evolutionary benefit, meaning that feigning likely encompasses a broader realm than is currently recognized in the symptom validity literature. Researchers and clinicians should leave their comfort zones and start asking difficult, intriguing, and sometimes even politically incorrect questions to further the field of symptom validity. Only then can we advance our insights in psychopathology and improve understanding of how people cope with life (e.g., by feigning) and the suffering that it inevitably generates.